

REMARKS

In the final office action of June 2, 2009 (the "Final Office Action"), the Examiner rejected claims 1-17 on obviousness grounds. The primary reference, Int'l Pat. App. No. WO 2001/066231 to Dannström et al. ("Dannstrom") was combined with U.S. Pat. No. 3,722,694 to Agranat ("Agranat"), U.S. Pat. No. 3,027,715 to Morris ("Morris"), and U.S. Pat. No. 2,678,529 to Buchi ("Buchi"), combined with "Official Notice" to reject claims 1-4, 7, 8, 13-15, and 17.

Claims 5 and 6 were rejected as obvious over the combination of Dannstrom, Agranat, Morris, Buchi, and Int'l Pat. App. No. WO 1999/026717 to Jitariouk ("Jitariouk"). Claims 9-11 were rejected as obvious over the combination of Dannstrom, Agranat, Morris, Buchi, and U.S. Pat. No. 4,689,150 to Abe et al. ("Abe"). Claim 12 was rejected as obvious over the combination of Dannstrom, Agranat, Morris, Buchi, and U.S. Pat. No. 5,352,361 to Prasad et al. ("Prasad"). Claim 16 was rejected as obvious over the combination of Dannstrom, Agranat, Morris, Buchi, Abe and further in view of U.S. Pat. No. 6,503,294 to Yoshikawa et al. ("Yoshikawa").

Claim amendments

The claim amendments do not add any new matter and are fully supported by the specification, particularly at paragraph [0026].

Rejection of the claims for obviousness

Claims 1-4, 7, 8, 13-15, and 17 were rejected as obvious over the combination of Dannstrom in view of Agranat, Morris, Buchi, and "Official Notice." Applicants believe that the amendments to independent claims 1 and 17 are sufficient to place the application in condition for allowance over the prior art and respectfully request reconsideration in light of the amendments and the following remarks. The amendments make clear that the elbow conduits are not merely in place for the purpose

of fluid flow, as suggested by the Examiner's official notice statement. Instead, the elbow bends combined with the "side by side relationship" of the separation assemblies and "at least one of the manifolds being unrestrained" gives the claimed device numerous unique structural features. In particular, the claimed device is able to expand and contract due to temperature changes thanks to the unrestrained manifold end in combination with the use of elbow conduits to provide a "spring-like" structure. This ability to expand and contract enables the use of high-performance membranes (e.g. a zeolite) under fluctuating temperature conditions, as pointed out in the application at paragraph [0008]. In addition, the device has a flexible design that can, for example, be arranged in parallel or series flow paths. For at least these reasons, Applicants respectfully request reconsideration and allowance of all claims 1-17 because independent claims 1 and 17 overcome the prior art and claims 2-16 depend therefrom.

The prior art, in particular the Dannstrom reference discloses a membrane tubesheet, potted end configuration, as discussed in the background in paragraph [0006]. Such a design is flawed for the type of service envisioned for the disclosed and claimed devices, as pointed out in paragraph [0007]. In particular, prior art devices like the one disclosed in Dannstrom will expand and contract when temperature fluctuations are applied, which causes seal integrity problems. In other words, Dannstrom fails to teach the problem stated in the background of the application and further fails to teach any possible solutions to the problems stated in the specification. In addition, none of the other references, Agranat, Morris, or Buchi, teach the problems or suggest any solutions associated with gas separation at fluctuating temperatures. In short, there is no teaching, suggestion, or motivation for a person of ordinary skill in the art to combine these references to solve the problems that are particularly pointed out in the application. For at least these reasons, Applicants respectfully request reconsideration and allowance of all claims 1-17 because independent claims 1 and 17 overcome the prior art and claims 2-16 depend therefrom.

CONCLUSION

In view of the amendments and remarks set forth above, Applicants respectfully request allowance of all pending claims. While no fees are believed to be due, the Commissioner is hereby authorized to charge Deposit Account No. 05-1328 for any fees associated with extensions of time for this application. Further, if the Examiner believes that an additional telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

/Adam P. Brown/

Adam P. Brown
Reg. No. 52,657
Attorney for Applicants

ExxonMobil Upstream Research Company
P.O. Box 2189
CORP-URC-SW359
Houston, Texas 77252-2189

Tel. 713-431-7649